SUMMARY OF THE OFFICE ACTION

Claims 1 – 7[5] are pending in the application.

Claims 6 and 7 are withdrawn from consideration.

Claims 1 – 5 are rejected.

The specification/disclosure is objected to by the Examiner.

THE CLAIMED INVENTION

The present invention, in a first aspect, provides a tree pusher comprising (a) a base; (b) a detachable head; and (c) means, mounted on the base, for supporting the detachable head, for urging the detachable head against the tree, for attaching the detachable head to the tree, and for separating the detachable head from the rest of the tree pusher as the tree falls, so that the detachable head remains attached to the tree as the tree falls.

The detachable head includes (d) a cylindrical rigid elongated member; (e) a plate fastened perpendicularly to one end of the cylindrical rigid elongated member; and (f) a plurality of prongs fastened obliquely to the plate, the prongs being constructed and arranged to embed themselves in the wood of a tree being felled. Each prong and the cylindrical rigid elongated member define therebetween an angle of from about five to about thirty degrees.

The detachable head further includes (g) a cylindrical tube, for movable disposition therein of the cylindrical rigid elongated member of the detachable head.

In a second aspect the invention provides a tree pusher comprising (a) a base; (b) a screw-type propeller jack, pivotally mounted on the base, for urging the tree pusher against the tree; (c) a first tube having first and second ends, the first end of the first tube being connected to the jack; (d) a second tube having first and second ends, the second tube having a smaller cross-sectional-area than the first tube, the first end of the second tube being disposed in and fastened to the second end of the first tube; (e) a detachable head; (f) a base for the detachable head, the base for the head including a cylindrical third tube, the detachable head including a cylindrical tube or bar, the base for the head being fastened to the second end of the second tube, and providing means for movable disposition of the cylindrical tube or bar in the cylindrical third tube; and (g) means for supporting the detachable head, for attaching the detachable head to the tree, and for separating the detachable head from the rest of the tree pusher as the tree falls, so that the detachable head remains attached to the tree as the tree falls .

The detachable head includes (h) a plate fastened perpendicularly to one end of

prongs being constructed and arranged to embed themselves in the wood of a tree being felled. Each prong and the cylindrical rigid elongated member define therebetween an

SCOPE OF THE PRIOR ART

U.S. Patent No. 4,564,173 to Atherton et al. discloses an apparatus, in combination with a bumper jack, for pushing a tree over when the tree is being cut down. When a base connected to the bumper jack is placed on a ground surface, the apparatus is tipped at an angle between the ground and the tree, and a jack handle will operate a jack mechanism to rise along a jack post, causing a support member to push a shaft through an aperture in a guide post until points on a tip member contact the tree, pushing the tree over as the tree is being cut down. Prongs on the tip member are parallel to the shaft. The tip member (30|20|) is affixed onto top end (74) of the shaft (28) by a set screw (76).

U.S. Patent No. 2,960,309 to Swanson discloses a tree-felling jack comprising a flat anchor plate adapted to overlie the ground and having a plurality of spaced ground-penetrating spades of identical length angularly depending in parallelism therefrom; a curved anchor plate adapted to overlie a tree trunk and having a plurality of spaced tree-penetrating prongs of identical length angularly projecting in parallelism therefrom; a first elongated pressure member of rigid material immovably fixed to the flat anchor plate and extending angularly upwardly therefrom; a second elongated pressure member of rigid material immovably fixed to the curved anchor plate and extending angularly downwardly therefrom in axial alignment with the first member; and hydraulic jack mechanism having a cylinder coaxial with, and interposed between, the members for slideably applying thrust longitudinally of the pressure members; the spades, prongs, jack cylinder, and pressure members all being in parallelism for quick release of the jack upon felling of a tree in a direction away therefrom. The spades (42) and prongs (35) of the anchor plate (25) are each disposed in two spaced parallel lines. The prongs (35) extend upwardly from the plate (25), and the plate (25) permits a firm grip without excessive

THE EXAMINER'S RATIONALE

In rejecting claims 1 – 5 under the judicially-created doctrine of obviousness-type double patenting over claims 1 – 11 of U.S. Patent No. 6,604,562 [6,604,561] to Smith, the Examiner states that, although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of the pending application are merely a broader re-worded version of that of the patent [application], and fail to set forth any differing subject matter.

In rejecting claim 1 under 35 U.S.C. 112, the Examiner states that the claim fails to positively recite any structure necessary to carry out the functional recitation, "the detachable head being constructed and arranged for attachment . . . and separation . . . ."

In rejecting claim 2 under 35 U.S.C. 112, the Examiner states that the claim fails to set forth structure necessary to carry out the functional recitations, " . . . a detachable head, constructed and arranged for engaging the tree . . . and for disengagement from the second end . . . the head remaining attached to the tree . . . ."

In rejecting claim 1 under 35 U.S.C. 102(b) over U.S. Patent No. 4,564,173 to Atherton et al., the Examiner states that Atherton discloses a tree pusher (fig.1) comprising a base (22) and a detachable head (figs. 2, 4); and means/jack, mounted on the base, for supporting the detachable head, and for urging the detachable against the tree (10, 12, 14, 16); the detachable head being constructed and arranged for attachment to the tree while the tree is being felled, and for separation from the rest of the tree pusher and remaining attached to the tree as the tree falls. The Examiner notes that the screw of head 30 allows the head to be detachable.

In rejecting claim 2 under 35 U.S.C. 103(a) over U.S. Patent No. 2,960,309 to Swanson in view of U.S. Patent No. 4,564,173 to Atherton et al., the Examiner states that Swanson discloses a tree pusher (fig. 1) comprising a base; a screw jack (26); a first tube (28) having first and second ends, the first end connected to the jack (26); a second tube (27) having first and second ends, the second tube having a smaller cross-sectional area than the first tube (fig. 1), the first end of the second tube being disposed in and fastened

The Examiner observes that Swanson does not disclose the head to be detachable, but states that Atherton teaches in a similar art the use of a detachable head (30) in conjunction with a jack mechanism for pushing a tree during a felling operation; and that, because the references are from such closely-related art, it would have been obvious to replace Swanson's non-detachable head with a detachable head for ease of replacement

REMARKS

The specification has been amended at page 7, paragraph 32, in compliance with the Examiner's observations and instructions.

With regard to pagination, applicant has reproduced his retained copy of the specification. In this retained copy, all pages were numbered, and said copy is submitted herewith. However, applicant was unable to modify the retained copy of this electronic version to correct the printing errors in paragraph 32. Applicant **was** able to make this correction in a computer-generated ABX copy of the specification. This copy, modified by the required corrections, and including page numbers, is also submitted herewith.

The specification has been amended at page 7, paragraph 36, to correct a printing error ("sown") in line 2 of that paragraph.

The specification has been amended at page 8, paragraph 39, by replacing "third plate **14a**" by – tube **14a** -- , to correct an incorrect reference to the element **14a** in line 4 of that paragraph.

Claims 1 – 4 have been amended, to overcome rejections under 35 U.S.C. 112, 102, and 103, and to define more clearly and definitely the claimed invention.

Claims 5 - 7 have been cancelled, to place the application in condition for allowance.

Claims 8 – 16 have been added.

Antecedent basis for amending claims 1 – 4, and for adding claims 8 – 18, is provided by the specification at pages 6 – 10, and by **FIGS. 1** and **2**.

A corrected set of drawings is submitted under 37 CFR 1.85(a) and 1.121(d), in compliance with the Examiner's objection to the drawings filed 06 August 2003.

A terminal disclaimer of U.S. Patent No. 6.604,562 to Smith is submitted

APPLICANT'S ARGUMENTS FOR PATENTABILITY

Claim 1 (currently amended)

The Rejection Under 35 U.S.C. 112

As currently amended, claim 1 recites means for supporting the detachable head, for urging the detachable head against the tree and attaching the detachable head to the tree, and for separating the detachable head from the rest of the tree pusher as the tree falls, so that the detachable head remains attached to the tree as the tree falls.

An element in a claim for a combination may be expressed as a means for performing a specified function without the recital of structure in support thereof, and such claim shall be construed to cover the corresponding structure described in the specification and equivalents thereof. 35 U.S.C. 112.

In the specification, the means for supporting the detachable head are described as a base comprising a tube having first and second ends, and a plate fastened to the first end of the tube. (Page 8, lines 6 – 9, as amended).

The means for urging the detachable head against the tree are described as a screw-type propeller trailer jack, pivotally mounted on the base, for urging the tree pusher against the tree. (Page 5, lines 6 – 8.)

The means for attaching the head to the tree are described as a plurality of prongs. (Pages 7 – 8, paragraph 38.)

The means for separating the detachable head from the rest of the tree pusher are described as the **circular** tube or bar **12a** and the **circular** tube **14a**, so that the tube or bar **12a** can freely rotate in the tube **14a** as the tree falls. (Pages 8 – 9, paragraph 0042.)

The Rejection Under 35 U.S.C. 102 over U.S. Patent No. 4,564,173 to Atherton et al.

It is respectfully submitted that Atherton et al. do **not** disclose a detachable head constructed and arranged for separation from the rest of the tree pusher and remaining attached to the tree as the tree falls, nor means for doing so, as recited in claim 1 as amended. The head (tip member 30[20]) is **affixed** onto the top end 74 of a shaft 28 by a set screw 76[16]. The bottom end 64 of the elongated shaft 28 is **affixed** into an aperture 54 in a support member 24 by a set screw 68. (FIG. 2; col. 2, lines 4 – 47.) It will be apparent to those skilled in the art that, in order for the head / tip member 30[20] to be separated from the rest of the tree pusher, and to remain attached to the tree as the tree falls, it would be necessary for an operator to loosen and remove the set screws 76[16] and 68 **before** the head is attached to the tree. To do so, however, would be to render the tree pusher inoperable, because these set screws are necessarily in place to keep the head 30 and the shaft 28 attached to the rest of the tree pusher. Moreover, not only is such manual loosening of the set screws neither disclosed nor suggested by the patent, but the reference actually teaches away from such a hypothetical scenario by implying that the head 30 pulls loose from the tree and remains with the rest of the tree pusher as the tree falls. (Claim 1.) A patent cited as a reference must be taken as a whole for what it fairly teaches. In re Wesslau, 147 USPQ 791.

A second basis for distinguishing over Atherton et al. is that the jack which they disclose is a **bumper** jack, not a **screw-type propeller trailer** jack, **pivotally** mounted on the base. (Specification, page 5, lines 6 – 8.) As previously noted above in reference to the rejection under 35 U.S.C. 112, the **screw-type propeller jack, pivotally** mounted on the base, comprises the means for urging the tree pusher against the tree and attaching the detachable head to the tree. It is to be further noted that there is no disclosure nor suggestion that the bumper jack disclosed by Atherton et al. is **pivotally** mounted on a base. Pivotal mounting of the screw-type propeller trailer jack provides a range of motion conducive to detaching the head from the rest of the tree pusher so that the head remains with the tree as the tree falls, and for ready conversion from a position for

– 7.) Furthermore: (a) A bumper jack is not capable of handling the weight of a large tree. (b) A bumper jack cannot extend its length to a jack post if a longer jack is needed to push the tree over. (c) The bumper-jack post would bear the entire weight of the tree. If the post should break, the tree could very possibly fall on the person or persons felling the tree, or fall in some other undesirable direction. (Specification. page 3, lines 1 – 8.)

A third basis for patentability over the patent to Atherton et al. is the structure of the means for attaching the detachable head to the tree being felled. As stated in the specification at pages 7 – 8, paragraphs 37 - 38: The detachable head **12 (FIGS. 2 and 3)** comprises a tube or bar **12a** having first and second ends **12b** and **12c**. The first end **12b** of the tube or bar **12a** is fastened to a first plate **12d**. A plurality of prongs **12e** are fastened to the first plate **12d**. Preferably, a second plate **12f** is fastened transversely to the prongs **12e**, to brace the prongs **12e**. **The tube or bar 12a and each prong 12e define therebetween an angle 12g of from about five to about thirty degrees.** The attachment means disclosed by Atherton et al. comprise points 70 which are **parallel to** the shaft 28 on which the tip member 30[20] is mounted.

A fourth basis for patentability over the reference to Atherton et al. is that, as previously noted, the means for separating the detachable head from the rest of the tree pusher comprise the **circular** tube or bar **12a** and the **circular** tube **14a**, so that the tube or bar **12a** can freely rotate in the tube **14a** as the tree falls. (Pages 8 – 9, paragraph 0042.) It was argued above that Atherton et al. disclose a head that does **not** separate from the rest of the tree pusher, and remain attached to the tree as the tree falls. These arguments are sound, and are firmly based on the specification/disclosure and claims of Atherton et al. By contrast, the detachable head described and claimed in the present application is constructed and arranged to do just that, and the means for doing so are clearly set forth in the specification at pages 8 – 9, paragraph 42, as noted.

The structures of both the detachable head and of the base for the head are crucial in implementing attachment to the tree and separation of the head from the rest of the tree pusher as the head remains with the falling tree.

It is critically important that the head **12** remains attached to the tree trunk as the tree falls. For this reason it is critical that the tube or bar **12a**, the tube **14a**, and the

can freely rotate in the tube **14a** and in the opening **14e** of the tube **14a** as the tree falls; a rectangular tube would bind. Detachability of the head **12** is an extremely important aspect of the present invention, and an extremely important advantage of the invention over the prior art.

The construction of the detachable head **12** of the tree pusher **2** is critical. In order to attach itself to the tree, the head **12** must embed itself and remain embedded in the wood of the tree. Otherwise, the bark of pine and hardwood trees will break, and the head **12** will come loose and slide off the trunk of the tree. With the head **12** constructed as shown in **FIGS. 2** and **3**, having prongs **12e** which define an angle **12g** of from about five to about thirty degrees with the tube or bar **12a**, the head **12** will remain in contact with the tree as the tree is pushed over its center of gravity to the point where the tree will fall. The center of gravity of a tree that is leaning e.g. ten degrees, with limbs on the side toward which the tree is leaning, is not in line with the trunk, but is somewhere out on the limbs. A tree with this type of lean has to be pushed far over center before the tree will fall. The angle **12g** of the prongs **12e** keeps the head **12** in contact with the trunk until and as the tree falls.

For trees that are twisted or crooked, the head **12** must embed and remain embedded in the wood, because the tree will twist or move while being felled. The prongs **12e** of the head **12** must remain embedded in the wood, and the head **12** must be able to turn in the tube **14a** so as not to lose contact with the tree, or to move the tree pusher **2** during the felling operation. The head **12** cannot be fastened or remain attached to the rest of the tree pusher **2**, because if the tree twisted or turned, the head **12** would twist or turn the tree pusher **2**, causing loss of control of the tree-pushing operation. As constructed, the pronged head **12** will turn or twist with the movement of the tree, and will not move or twist the tree pusher **2**. The head **12** will detach from the remainder of the tree pusher **2** and stay with the falling tree, leaving the rest of the tree pusher **2** safe and unmoved. The head **12** is then removed and recovered from the trunk of the fallen tree, and reused in future operations.

Prior-art tree pushers do not have this important feature. Consequently, either the head will pull out of the tree and remain with the frame of the tree pusher as the tree falls,

case, control of the operation will be lost; in the latter, a very dangerous situation will be created—a situation which could cause serious injury to personnel and/or major damage to the tree pusher. (Specification, pages 8 – 11, paragraphs 42 – 45.)

Reconsideration and withdrawal of the rejection are respectfully requested.

Claim 2 (currently amended)

The Rejection Under 35 U.S.C. 112

As currently amended, claim 2 recites means for supporting the detachable head, for urging the detachable head against the tree, for attaching the detachable head to the tree, and for separating the detachable head from the rest of the tree pusher as the tree falls, so that the detachable head remains attached to the tree as the tree falls.

The arguments advanced above for claim 1 as amended apply equally to claim 2 as amended.

Reconsideration and withdrawal of the rejection are respectfully requested.

The Rejection Under 35 U.S.C. 103 Over U.S. Patent No. 2,969,309 to Swanson in View of U.S. Patent No. 4,564,173 to Atherton et al.

The arguments advanced above for claim 1 as amended apply equally to claim 2 as amended, with respect to the Atherton et al. reference.

With regard to the Swanson reference, it is submitted, first, that, as amended, this claim recites (f) a base for the detachable head, the base for the head including a third tube, the detachable head including a tube or bar, the base for the head being fastened to the second end of the second tube, and providing means for movable disposition of the tube or bar in the third tube. It is respectfully submitted that Swanson fails to disclose, suggest, or in any way make obvious an additional third tube, a tube or bar, and means for movable disposition of the tube or bar in the third tube.

It is submitted, second, that the jack disclosed by Swanson is by no means

as means for urging the detachable head against the tree and attaching the head to the tree. Furthermore, the jack disclosed by Swanson is **not pivotally** mounted, as required by the means clause in paragraph (g) of applicant's amended claim. The advantages of the screw-type propeller trailer jack over other types of jacks have been previously recounted, as have the advantages of pivotally mounting the jack.

A third basis for patentability over the patent to Swanson is the structure of the means for attaching the detachable head to the tree being felled. As stated in the specification at pages 7 – 8, paragraph 37: A plurality of prongs **12e** are fastened to the first plate **12d**. Preferably, a second plate **12f** is fastened transversely to the prongs **12e**, to brace the prongs **12e**. **The tube or bar 12a and each prong 12e define therebetween an angle 12g of from about five to about thirty degrees.** The attachment means disclosed by Swanson comprise prongs 35 **parallel to** the elongated pressure member 27. (Col. 2, lines 13 – 16; Figures 1 and 2.)

Finally, it is submitted that, not only, as observed by the Examiner, does Swanson not disclose a detachable head, but this patent actually teaches away from applicant's claim recitation of leaving the detachable head attached to the tree as the tree falls. Specifically, at col. 2, lines 21 – 24, the reference reads: "Prongs 35 extend upwardly from plate 25 and the plate permits a firm grip without excessive penetration while also **causing the plate to fall away from the tree as the tree falls**."

Reconsideration and withdrawal of the rejection are respectfully requested.

Claim 3 (currently amended)

This claim has not been rejected by the Examiner under 35 U.S.C. 102 or 103 over prior art.

As amended, claim 3 recites (h) a plate fastened perpendicularly to one end of the tube or bar of claim 2, and (i) a plurality of prongs fastened obliquely to the plate, the prongs being constructed and arranged to embed themselves in the wood of a tree being felled.

The concluding arguments advanced above regarding the structure of the

cogent here. These arguments are taken directly from the specification, paragraphs 43 and 44. Fastening the plate **perpendicularly** to the tube or bar, and fastening the prongs **obliquely** to the plate ensure that the prongs define an acute angle with the tube or bar.

Claim 4 (currently amended)

This claim has not been rejected under 35 U.S.C. 102 or 103 over prior art.

As amended, claim 4 specifies that each prong and the tube or bar define therebetween an angle of from about five to about thirty degrees.

The arguments advanced above in support of claim 3 as amended apply with equal cogency to claim 4 as amended.

Claims 1 – 4 (currently amended)

The Double-Patenting Rejection

In compliance with the rejection of these claims under the judicially-created doctrine of obviousness-type double patenting over U.S. Patent No. 6,604,562 [6,604,561] to Smith, applicant submits herewith an appropriate terminal disclaimer.

Summary of Arguments for Patentability

It is submitted that, in view of the amendments, arguments, and terminal disclaimer, claims 1 – 4 are now allowable. Reconsideration, withdrawal of the rejections, and allowance of claims 1 – 4 are respectfully requested.

Claim 8 (new)

The arguments advanced in support of claim 3 (amended) apply with equal cogency to claim 8.

Claim 9 (new)

The arguments advanced in support of claim 4 (amended) apply with equal relevance to claim 9.

Allowance of claim 9 is respectfully requested.

Claim 10 (new)

This claim recites a **cylindrical** tube for movable disposition therein of the **cylindrical** rigid elongated member of the detachable head.

It is critically important that the head **12** remains attached to the tree trunk as the tree falls. For this reason it is crucial that the tube or bar **12a**, the tube **14a**, and the opening **14e** be circular/cylindrical, not square or rectangular. A cylindrical tube or bar can freely rotate in the tube **14a** and in the opening **14e** of the tube **14a** as the tree falls; a rectangular tube would bind. Detachability of the head **12** is an extremely important advantage of the invention over the prior art. (Specification, paragraph 42.)

Allowance of claim 10 is respectfully requested.

Claim 11 (new)

This claim is a combination of claim 1 (amended) and claim 8. Accordingly, the arguments advanced in support of claims 1 and 8 apply with equal force to the combination claim 11.

Allowance of claim 11 is respectfully requested.

Claim 12 (new)

This claim recites a cylindrical tube, for movable disposition therein of the

This claim is identical with claim 10, except that claim 10 depends from claim 8, and claim 12 depends from claim 11. Accordingly, the reasons advanced in support of claim 10 are as cogent for claim 12.

Allowance of claim 12 is respectfully requested.

Claim 13 (new)

This claim specifies that the means for urging the detachable head against the tree include a screw-type propeller trailer jack, pivotally mounted on the base.

A screw-type propeller trailer jack is capable of (a) handling the weight of a large tree, and (b) extending its length to a jack post if a longer jack is needed to push the tree over. Pivotal mounting of the jack provides a range of motion conducive to detaching the head from the rest of the tree as the tree falls, and for ready conversion from a position for moving the tree pusher into a stored or retracted position. (Specification, page 7, lines 2 – 7.)

Allowance of claim 13 is respectfully requested.

Claim 14 (new)

Claim 14 recites the means for separating the detachable head from the rest of the tree pusher.

It is critically important that the head remains attached to the tree trunk as the tree falls. (Specification, paragraph 42, line 1.) To do so requires that the head detach itself from the rest of the tree pusher. The means here recited are neither anticipated nor made obvious by the prior art.

Claim 16 (new)

Claim 16 is exactly the same as claim 9, except that claim 9 refers to claim 8, and claim 16 to claim 14. Accordingly, the reasoning applied to allowability of claim 9 is equally applicable to claim 16.

SUMMARY, CONCLUSIONS, AND PETITION

In conclusion, it is submitted that, in view of the amendments, arguments, corrected formal drawings, and terminal disclaimer herein presented, the application is in condition for allowance. Reconsideration, withdrawal of the objections and rejections, and allowance of the application are respectfully requested.

Respectfully submitted

Reginald F. Roberts, Jr.
Registration No. 29,340
Agent for Applicant
P.O. Box 4535
Baton Rouge, LA 70821-4535
Tel. (225)343-8500
Fax (810)821-5303
e-mail: thinkful@bellsouth.net